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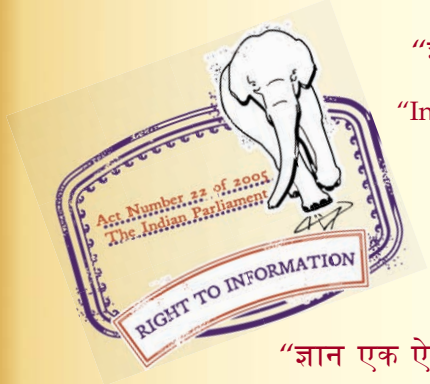
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IS 2397 (1988): Wafers [FAD 16: Foodgrains, Starches and Ready to Eat Foods]



"ज्ञान से एक नये भारत का निर्माण"
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"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

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AMENDMENT NO. 1 AUGUST 1992
TO
IS 2397 : 1988 SPECIFICATION FOR WAFERS

(Second Revision)

(*Page* 3, *clause* 5.1.2, *Note*) — Substitute 'Note 1' *for* 'Note' and insert the following new Note:

'Note 2 — The amount of filling in sandwiched wafers shall be tested on line during the process of filling. Records of the amount of cream added to the wafers shall be maintained.'

(*Page* 3, *clause* 5.1.3, *heading*) — Substitute '*Coated (enrobed) wafers*' for '*Coated wafers*'.

(FAD 15)

Reprography Unit, BIS, New Delhi, India

UDC 664'681'2 (First Reprint JANUARY 1993) IS : 2397 - 1988

Reaffirmed 2010

Indian Standard

SPECIFICATION FOR WAFERS

(Second Revision)

Bakery and Confectionery Industry Sectional Committee, AFDC 31; Bakery Industry Subcommittee, AFDC 31 : 1 [Ref : Doc : AFDC 31 (2914)]

0. Foreword — While formulating this standard, due consideration has been given to the relevant Rules prescribed by the Government of India under the Prevention of Food Adulteration Act, 1954 and the Standards of Weights and Measures (Packaged Commodities) Rules, 1977. This standard is, however, subject to the restrictions imposed under these, wherever applicable.

1. Scope — This standard prescribes the requirements and the methods of sampling and test for wafers.

2. Types — Wafers shall be of any of the following three types:

a) Plain,

b) Sandwiched, and

c) Coated.

3. Essential Ingredients — The following materials shall be used in the preparation of batter of wafers:

a) *MAIDA* — Conforming to IS : 7463-1988 'Specification for wheat flour for use by biscuit industry (*first revision*)', and

b) *Water* — *See* IS : 4251-1967 'Specification for quality tolerances for water for processed food industry'.

4. Other Ingredients

4.1 In addition to the essential ingredients specified under **3**, any of the following ingredients may be added to the wafer batter

1) Baking powder [*see* IS : 1159-1981 Specification for baking powder (*first revision*)], or other approved aerating/leavening agents;

2) Cereals;

3) Chocolate;

4) Citric acid;

5) Malic, lactic and tartaric acid;

6) Vinegar and acetic acid;

7) Cocoa powder;

8) Coffee extract;

9) Food colours — permitted in PFA Rules;

10) Desiccated coconut [*see* IS : 966-1975 'Specification for desiccated coconut (*first revision*)];

11) Dextrose;

12) Dry fruits and nuts;

13) Fruit and fruit products;

14) Edible vegetable products;

15) Edible common salt [*see* : IS 253-1970 Specification for edible common salt (*second revision*)] or iodized salt [*see* IS : 7224-1973 Specification for iodized salt];

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16) Emulsifying agents — permitted in PFA Rules;

17) Stabilizing agents — permitted in PFA Rules;

18) Preservatives — permitted in PFA Rules;

19) Antioxidants — permitted in PFA Rules;

20) Ascorbic acid;

21) Enzymes and other gluten conditioners — fungal alpha amylase,

22) Fat or shortening-hydrogenated edible vegetable oil (*see* IS : 10633-1983 Specification for vanaspati), refined edible oil, bakery shortening butter, margarine, butter oil, or their mixture;

23) Flavouring essences;

24) Flavour improvers and fixers;

25) Flour improvers;

26) Ginger;

27) Edible oilseed flours, concentrates and isolates — conforming to relevant Indian Standard specifications;

28) Honey;

29) Jellifying agents;

30) Liquid glucose [*see* IS : 873-1964 Specification for liquid glucose (*first revision*)];

31) Malt products;

32) Milk products, such as butter milk powder, cheese, milk powder [*see* IS : 1165-1986 Specification for milk powder (*second revision*)], condensed milk [*see* IS : 1166-1986 Specification for condensed milk (*first revision*)], casein [*see* IS : 1167-1965 Specification for casein (edible quality) (*revised*)];

33) Nutrients-vitamins/minerals;

34) Gluten;

35) Spices, condiments and their extracts;

36) Edible flours/starches;

37) Sugar and sugar products such as *gur*, jaggery, *bura* and *khandsari*;

38) Wheat *ATTA* [*see* IS : 1155-1968 Specification for wheat *ATTA* (*second revision*)];

39) Yeast;

40) Soluble starch phosphate [*see* IS : 10597-1983 Specification for soluble starch phosphate (edible grade)]; and

41) Eggs.

4.2 *Improvers* — The following improvers in the quantities given against each may be used:

a) Ammonium persulphate : Not exceeding 2·5 g/kg of the mass of the flour

b) Potassium bromate and/or potassium iodate : Not exceeding 50 mg/kg of the mass of the flour

4.3 *Dough Conditioners* — The following dough conditioners in the quantities given against each may be used:

a) Calcium or sodium salt of stearoyl-2-lactylate : Not exceeding 2·0 g/kg of the mass of the flour

b) Polysorbates : Not exceeding 2·0 g/kg of the mass of the flour

5. Requirements

5.1 Wafers shall be properly baked and shall not show signs of underbaking or overbaking. They shall be crisp, crunchy and light in texture. The design impressed on them, if any, shall be clear. They shall have an agreeable odour typical of well-baked wafers, and shall be free from soapy or other objectionable flavours, insect and fungus infestation. The wafers shall also be free from any harmful

or injurious foreign matter.

Note — The appearance, taste and odour shall be determined by sensory tests.

5.1.1 *Plain wafers* — Plain wafers may be hollow or flat in any shape desired by the purchaser.

5.1.2 *Sandwiched wafers* — Sandwiched wafers shall have two or more plain wafers, sandwiched with filling in between. The filling may be cream, jam, jelly, marshmallow, caramel, figs, raisins or the like, and shall be not less than 50 percent by mass of the filled wafer.

Note — For the purpose of this standard, 'cream' means a homogenous mixed preparation of hydrogenated fat, or bakery shortening, icing sugar, flavours and permitted food colours with or without other ingredients in small proportions.

5.1.3 *Coated wafers* — These include both half-coated and full-coated wafers. The coating may be of chocolate, substitute fats butter scotch and the like and shall not be less than 60 percent by mass of the coated wafers.

5.2 The wafers shall be manufactured in premises maintained under hygienic conditions (*see* IS : 5059-1969 Code for hygienic conditions for large scale biscuit manufacturing and bakery units).

5.3 The wafers shall also comply with the requirements given in Table 1.

TABLE 1 REQUIREMENTS FOR WAFERS

Sl No.	Characteristic	Requirement		Method of Test Ref to Appendix of IS : 1011-1981*
		Plain	Sandwhich/ Coated	
i)	Moisture, percent by mass, *Max*	4·5	6·0	A
ii)	Acid insoluble ash (on dry basis), percent by mass, *Max*	0·05	0·05	B
iii)	Acidity of extracted fat (as oleic acid), percent by mass, *Max*	1·0	1·0	C

Note — In the case of coated wafers, the coating shall be removed before carrying out the tests.

*Specification for biscuits (*second revision*).

6. Packing and Marking

6.1 *Packing* — Wafers shall be packed in clean, sound containers made of tinplate, pack-rolled cold reduced carbon steel (PCRC) sheets, cardboard, paper, aluminium foil laminate (conforming to IS : 8970-1978 Specification for paper-aluminium foil laminate for packaging of food and pharmaceuticals), or other material as agreed to between the purchaser and the vendor, in such a way as to protect them from contamination and absorption of moisture. They shall not come in direct contact with packing material other than clean grease-proof or sulphite paper, cellulose film or other non-toxic packing material which may be covered with a moisture-proof film, waxed paper or moisture-proof laminate or coated paper.

6.1.1 In case of packets having 50 and more wafers, a complaint slip giving code number shall be included in the container.

6.2 *Marking* — The following particulars shall be clearly and indelibly marked or labelled on each container:

a) Name or trade-name, and type of the material;

b) Name of the manufacturer;

c) Batch or code number;

d) Number of wafers;

e) Net mass;

f) Date of manufacture;

g) The statement 'Contains permitted colours and added flavours'; and

h) Other requirements laid down under the Standards of Weights and Measures (Packaged Commodities) Rules, 1977/PFA Regulations.

6.2.1 *Standard marking* — Details available with the Bureau of Indian Standards.

7. Sampling

7.1 Representative samples of the material shall be drawn and the criteria for ascertaining conformity of the material to the requirements of this specification shall be as prescribed in Appendix D of IS : 1011-1981 'Specification for biscuits (*second revision*)'.

8. Tests

8.1 Tests shall be carried out as prescribed in 5 and the appropriate in appendices specified in Table 1.

8.2 *Quality of Reagents* — Unless specified otherwise, pure chemicals and distilled water [*see* IS : 1070-1977 Specification for water for general laboratory use (*second revision*)] shall be used in the tests.

Note — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

EXPLANATORY NOTE

The demand for wafers suitable for serving with ice-cream or for the production of plain, sandwhiched or coated wafers is gradually on the increase. In the manufacture of wafers, the consistency and composition of the batter, mixing time, baking time and temperature are of considerable importance.

This standard was first published in 1963 and subsequently revised in 1972. In the revised version, the scope of the standard had been enlarged to cover wafers of all shapes; separate requirements had been specified for plain and modified wafers and the list of permitted ingredients had been enlarged. A provision had also been made for keeping a complaint slip in the wafer packets (*see* 6.1.1) to contain the modified date of manufacture which could be used by the consumer in case of complaint.

In this revision, the classification of wafers has been amended to cover coated wafers also, and the terminology 'modified wafers' has been substituted by 'sandwiched wafers'. The amount of filling in these wafers has been further increased from 20 to 50 percent and minimum limit has been provided for the coating in coated wafers. The list of optional ingredients has also been enlarged. This standard also incorporates amendment No. 1 to the standard.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Reprography Unit, BIS, New Delhi, India